DEVELOPMENT VERSUS GROWTH: Japan's Move from Quantity towards Quality

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It is usual to see the post-war performance of the Japanese economy mainly in terms of the high growth rates it produced for almost three decades. Japan's ability to find the responses best suited to the challenges of the age to its own interests in times of difficulty is less known. While the forced slow-down of the 1970s was accompanied by uniquely successful structural changes of the economy, there seems to be a new stage of development extending to an ever greater number of spheres of the economy and society taking place at present. This is indicated by the main targets of the plan in force, by declarations made by well- known policy- markers, economists and corporate executives, by the directions of technical progress and environmental protection, and by the daily practice in Japan in production, consumption and corporate management.

Yet it would be a big mistake to jump to the conclusion that Japan is about to change in an abrupt way. The centuries old traditions are extremely strong, and give way to new elements only gradually. But it is of the utmost importance to recognize these elements early enough, because they are what will define Japan's future direction.

The present paper aims at reviewing these small (in some cases far from small) changes, which in the author's view may lead in the longer term to yet another Japanese "miracle": the formation of a society and economy based on quality rather than quantity.

I INTRODUCTION: A HYPOTHESIS

1.1 Japan in 1992 and 1993 had growth rates so low they were considered recessionary. As if to compensate for this bearish domestic demand for investment and consumption, Japanese manufacturers renewed their efforts on world markets, so contributing to a further increase in Japan's trade surplus. This flood of Japanese products will obviously have to meet international, mainly US and Western European complaints, and some countermeasures serving as barriers to Japanese exports.

1.2 It has similarly become evident that there cannot be much more delay in opening up Japan's domestic market, which is still protected mainly by administrative, non-tariff barriers. Owing to the increasing difficulties in worldwide sales and the intensifying competition at home, two main trends already noticeable today are certain to gain momentum both in their depth and breadth in the future. One of them, most often referred to euphemistically as re-

engineering, is a clear rationalization of the process of production or any other type of economic activity, of so extensive a kind that it is best illustrated by the facts that more than 2.3 million people were employed by Japanese companies abroad in 1994, and in 1993, for the first time in history, more than half the cars sold by Japanese companies in the United, States had been made there. (Projections for 1994 suggest that Japan's worldwide car production outside Japan will also surpass its car exports.) The other growing trend is cooperation among Japanese companies in manufacturing (and even standardizing) certain components, entry by them into some joint R & D activity, and establishment of mutual maintenance and repair services for each other's customers. (Hitachi, for example, is part of a project called Electronic Data Interchange, which will standardize networks so that big manufacturers can send orders to each other's suppliers.)

1.3 Nevertheless, I remain quite convinced that the slow-down in Japan's growth rate should not simply be explained in terms of factors relating to the business cycle or climate. I would prefer to point to the likelihood of Japan's moving into a new phase of development, as the country did in the early 1970s. For the same reason, economic and social changes of a more comprehensive and far-reaching character can be expected. In fact the harbingers of these have already appeared. This paper, in fact, sets out to discuss these early signs, although there is no hope or intention of doing so exhaustively.

According to my initial hypothesis, the Japanese economy has achieved a level of development and a critical mass at which only a slower growth rate (of around 3%) is sustainable, and a faster rate would not in fact be desirable. This, however, dose not come as a shock in Japan, either on the macro level or the micro level of companies and individuals. The well-tried practice of adjustment to new conditions is being pursued, according to the principle of taking advantage of one's needs. Such needs, however, leave room for very important, if not quantifiable qualitative changes. Change in Japan, of course, never means an abrupt, radical abandonment of the past. The preservation of tradition and the introduction (or adoption) of new approaches can take place simultaneously. So attention must be paid in good time to manifestations or new approaches, which may, in the long run, lead on to the realization of changes on a bigger scale.

II THE LATEST PLAN AND SOME AUTHORITATIVE VIEWS

2.1 Even if plans are only considered informative or indicative in Japan, it is worth surveying at some length the latest five-year plan, for the period 1992-6. This document of more than 100 pages subtitled "Sharing a Better Quality of Life around the Globe", also stresses the priority of quality over quantity, and envisages an average annual rate of real growth of 3.5%.

The first part of the plan outlines the ingredients of a better quality of life considered most important: fuller assertion of individual interests (in particular those of consumers) and an improvement in housing conditions. To introduce greater respect for individuals, the plan aims to cut working hours (from about 2,000 to 1,800 hours a year) and improve

environmental conditions in the broadest sense (*i.e.* to include educational, cultural and recreational conditions), so as to enhance the time spent on highquality recreation. Emphasis has also been placed on ensuring real equal chances for four strata of society.

The well-known disadvantages of women are to be tackled by measures to bring them equal recognition with men at work, based on closer implementation of existing law. Working conditions will be established to make it more possible for them to combine work and motherhood (rather than choose between them), and to encourage their full or part-time reemployment after the period spent at home bringing up their children. As a part of the approach to care for the aged, several ways of "extending" employment will be devised, in order to balance out a lowering of the retiring age to 60. The plan also promises better working and living conditions for the physically and mentally handicapped and for foreign citizens in Japan. A safe, healthy and comfortable way of living is targeted for all members of society. According to a more recent forecast published by the Japan Centre for Economic Research, percapita real social transfers will triple between 1990 and 2010.

In discussing the importance of consumer interests, the document uses a much wider definition of consumption than usual, to cover 1) all services and community and volunteer activities that facilitate family life, 2) the encouragement and popularization of a life style in harmony with the environment, and 3) the establishment of transparent anti-monopoly and procompetition market rules that can help to close price differentials between domestic and overseas markets. (As the Japanese began to travel abroad in large numbers, criticisms of high domestic prices became more strident. This applies not only to well-known examples like rice and beef, but to almost any good. Deregulation has become a buzz word in government and consumer circles. Even civil disobedience appeared recently, when an unlicensed filling station began to sell motor fuel some 20% cheaper than the average pump prices in Japan.) The introduction of further measures of consumer protection is also planned, particularly the provision of fuller information, extension of the system of product liability, and the provision of more public sevices to the consumer.

The plan consideres the provision of high-quality living space one of the main factors in improving the quality of life. Here land prices and housing policies are to be influenced in a way that allows quality housing to be acquired for a sum equivalent to about five times the average working household's annual income, *i.e.* the savings of 15-20 years. Central and local resources will be assigned to developing new land areas and enlargement and improvement of the transport and communication systems. (The extensive golf-course developments taking place in Japan even today exemplify how greater priority needs to be given to ensuring more and better living space to ordinary people. For this purpose, more and more Japanese have no other opportunity outside the home than to rent so-called allotment gardens averaging about 15 sq. m in size.)

After the second chapter of the plan, which looks at harmonious coexistence with the global community and Japan's active contribution to this, Chapter 3 returns to Japan's own backyard again, and the problem of how to establish the bases for further development. To

construct a vital economy and society in harmony with the environment, reform of the private sector and business life is foreseen, so as to ensure greater transparency and better chances for the actors on the market, and to strengthen ties to the regional and global community. An attempt to adjust the structure of the economy to future needs is also forecast. Not only production, but consumption will have to be made environment-friendly, by developing new technologies, for instance. On the subject of setting the fundamental conditions for development, the plan mentions a more extensive system of state promotion of science and technology, the education of independent and creative persons, and comprehensive energy policies. Finally, special attention is to be paid to reducing regional disproportions (e.g. overconcentration), to giving more scope to local diversity, and to building up relations between areas.

2.2 The plan is based on the Japanese peosle's love of nature and peace and their desire for self-development. (This contrasts with such epithets as "economic animals" and "workaholics" often used by Western analysts to describe the Japanese.) It is in line with documents issued by previous governments, so illustrating the permanence of such ideas and the gradual way in which major changes take place in Japan. A book by ex-Prime Minister Kakuei Tanaka published some two decades before (Plan for Remodelling the Japanese Archipelago) presented a vision of a land in which "man, sun and green shall prevail", and other prime ministers like Takeo Miki and Takeo Fukuda have expressed similar views. While Kiichi Miyazawa pledged to create a "life-style superpower" in Japan, Morihiro Hosokawa used the expression "a nation of quality and substance" (shitsujitsu kokka), by which he meant, as his special adviser on political and social affairs explained, that "Japan should try to develop a distinctive lifestyle that stresses quality and simplicity and avoids excessive waste."

Saburo Okita, a former Minister of Foreign Affairs who died in 1993, remarked very explicitly in one of his writings, "We must ask ourselves wheter it is not time to discard our 'catch-up capitalism'. By holding down growth to 3%... Japan will need to worry less about the destruction of the environment, shortage of labour and trade friction... With an economy moving on a more moderate pitch, holding down pollution will become easier. Japanese workers will not have to put in so many hours, and the quality of life in general will improve."

Professor Shigeto Tsuru, an internationally renowned Japanese economist, also presented the main directions for Japan to follow along similar lines in his recent book, *Japan's Capitalism: Creative Defeat and Beyonds* Japan, he suggested, should become a world centre for health, education, research and technical innovation. It should enable both its own and other countries' citizens to enjoy its places of scenic beauty. It should raise its level of aid to developing countries and open up its markets more widely to their manufactures. (In terms of absolute amount donated by OECD member countries, Japan came first in both 1992 and 1993, but the ratio of Japan's overseas development aid to its GNP was rather less than the OECD average: 0.30 as opposed to 0.33 in 1992, and 0.26 as opposed to 0.29 in 1993.)

II TECHNICAL DEVELOPMENT AND ENVIRONMENTAL CONTROL

3.1 Official documents and lists of priorities drawn up by researchers and company staff give central attention to aspects of the quality of life, such as cure and prevention of disease and environment protection. While the former, under the label technical globalism, emphasize the increasing role of basic research and press for broader international cooperation, one of the latter forecasts listed mainly qualitative achievements.

A questionnaire sent by Japan's National Institute of Science and Technology to 3,000 expert staff in private firms, universities and government research laboratories yielded the following estimated times of arrival for future technical advances:

1998	Substitutes for ozone-damaging CFC gases
1999	Large-volume, coherent optical communication systems
2000	Silicon memory with an access time of 1 nanosecond
2001	Economical way of removing usable products from urban waste
2002	Memory chips with a capacity of 1 gigabyte
2003	Technology to prevent No _x emissions; widespread use of biodegradable packaging
	materials
2004	Ultra high-speed computers
2006	Treatment for AIDS; prediction of volcanic eruptions 2-3 days in advance
2007	Effective method of preventing the spread of cancer
2008	Methods of limiting CO ₂ emissions
2009	Elucidation of cancer-related genes and carcinogenesis
2010	Understanding the mechanism for almost all types of cancer; early prediction of
	earthquakes of Magnitude 7 and over; nursing robots
2011	Prevention of Alzheimer's disease
2013	Drugs to prevent cancer
2015	Treatment of senile dementia
2017	Fast-breeder reactors
2020 +	Fusion reactors

3.2 As living standards have risen, so ground has been gained by a more environmentally friendly preference for development over growth. Laws and regulations to protect the environment in the broadest sense began to be made in the early 1970s. According to a report published recently by the World Bank, Japan has managed in the last two decades to reduce emissions of sulphur oxides, nitrogen oxides and carbon monoxide by 83, 29 and 60% respectively. Interestingly, these achievements are not simply the product of state intervention or guidance, because there are some 28,000 direct agreements still in force between industrial firms and residential communities, made on the basis of different local circumstances.

An environmentally friendly attitude of mind is a natural, innate characteristic of the

Japanese people. Love of nature and a sparing attitude to money, space and materials all have longstanding, deep-rooted traditions in Japan. By stark contrast with the extravagance and excessive or conspicuous consumption of European (perhaps particularly Eastern European) celebration, Japanese celebration and festivities are usually more to do with an eternal attachment to nature and maintenance of ancient traditions. Even more importantly, the daily behaviour and consumption patterns of Japanese people are far more economical with raw materials and energy than those of their Western counterparts, although the latter's attitudes sadly seem to be on the rise in Japan. Based on a technical and technological state of development among the highest in the world, Japanese products, sought after both on domestic and world markets for their outstanding quality, are made under very strict environmental standards.

3.3 Japanese companies are sometimes willing nowadays to weaken their market positions somewhat in purpuit of long-term aims that contribute to sustainable development. The 11 biggest car manufacturing compaines, for example, recently started a joint undertaking to develop a new generation of catalytic converters that would remove nitrogen oxides and carbon monoxide from vehicle exhausts. The project has received a big subsidy (roughly 70% of all costs) from the Ministry of International Trade and Industry and other public bodies. Since some 50 million tons of waste were generated in Japan in 1990, a number of Japanese companies manufacturing steel saw it is as good commercial opportunities in developing miniature incinerators. Nippon Steel, one of the world's biggest steel corporations, now has a prototype that uses coke as an additive and can recycle nearly all materials, so that the waste is shrunk down at high temperatures to 3% of its orginal volume.

The number of households taking part in the selective waste collection that makes recycling possible is steadily growing. During fiscal 1991, for example, households participating in the recycling programme in Kobe City obviated by so doing the cutting down of 600,000 living trees (240 ha of woodland). Further results could be achieved if companies, too, were ready to handle waste selectively. (The corporate sector in Tokyo generates twice the volume of waste of households.)

- **3.4** A number of Japanese cities are trying to apply the concept of an "ecopolis", in which there will be harmony between people and urban planning. According to Morioka Tohru, Associate Professor of the Environmental Planning Department at Osaka University, the three basic principles of the concept are there:
- 1) No attempt in made to try and shift the burden of solving the problems of pollution onto the next generation.
- 2) Environmental issues are not to be resolved at the expense of other regions (or countries).
- 3) Responsibility is not shifted onto others; we ourselves must do our best.

Kobe, which is increasingly conspicuous for its modern, but human-oriented architecture, has already taken quite a number of measures towards becoming an ecopolis, perhaps the most

cospicuous being the establishment of a new district called Rokko City, an area of 580 ha reclaimed from the sea. Kobe as a whole expects 60-70% recycling rates metals and paper in a few years' time. In avoiding the pollution hazards associated with paper waste, reliance is being placed on returnable packaging being used by producers and shops and on voluntary assistance of citizens. The long-term development plan for the city sets a target of 30% green open space. So suburban construction has been placed under very strict control. A new, comprehensive development plan will be introduced for the 21st century, with the aim of promoting a sustainable development in which economic and environmental considerations will be harmonized.

N NEW DIRECTIONS IN PRODUCTION, CONSUMPTION AND MANAGEMENT

4.1 New traits are appearing in both individual and corporate behaviour, summed up very clearly by Toshiro Shimoyama, President of Olympus Optical Co.: "Society is moving away from a mass-production, mass-market mind-set. Companies are producing more customized products in response to user needs, and the recent attention given to environmental problems will put limitations on behaviour that were thought unacceptable in the past. People are changing from an emphasis on transient consumption, which might be termed a flow, to long-term consumption, or the building up of a capital stock. In a nutshell, quality is becoming more important than quantity."

The considerable qualitative changes in the work place in the early 1990s have been summarized by Naoyuki Kameyama, Research Director at the Japan Institute of Labour, as follows:

- Growth of the service sector, which requires more flexible staffing systems to cope with fluctuations in business volume.
- Technological innovations in production machinery and methods, which have, for example, begun to blur the traditional blue-collar and white-collar roles.
- New management strategies which focus on individual abilities, rather than maintenance
 of an efficient and uniform workforce, on individual accountability for set goals, and on
 hiring mid-career expertise for new business development at home and in unfamiliar
 international markets.
- A longer-term labour shortage, foressen as demographic changes transform Japan into an
 ageing society, resulting in the need to entice normally non-mainstream workers, such as
 women and retired persons, into the work force by creating conditions that suit their lifestyle patterns.
- A fundamental change in work attitudes, motivation and perception of the ideal job, when
 economic growth has enhanced life-styles and created more divervified interests.

4.2 The reduction of working hours, as was seen in the government plan examined in Chapter II, has become one of the crucial issues in the economy and society. The great number of arguments for and against such a reduction are best illustrated by some of the opinions expressed at a workshop discussion reported on September 10, 1991 in the daily paper Asahi Shimbun. Etsuya Washio, President of the Japan Federation of Steelworkers' Unions: "We have to recognize that the price of material affluence is fast becoming too high. What we should be seeking is spiritual affluence... Even if the shorter hours caused the pace of economic growth to slow, they would improve the quality of life. . . Management ought to end its habit of assessing work-place performance collectively, rather than assessing the performance of each individual. This practice makes it hard for the individual to spend less time at work." Jiro Nemoto, President of the company Nippon Yusen: "Numbers cannot tell the whole story. We also have to consider the quality of the time spent anay from work. . . The quality of vacation time should be enhanced, so that it becomes psychologically refreshing and enjoyable. . . Part of the problem is the attitudes of the workers themselves. They often stay late just to lend moral support to others still working. They must become more individualistic in a healthy sense..." Yuko Tanaka, Professor at Hosei University, touched upon even wider correlations: "The length of working hours, we should remember, affects families as well as society and companies. Without enough time for relaxation and recreation, people lose touch with nature and their mental and physical health deteriorates. . . Almost everything people want these days has to be purchased. . . It is sad that people today have so little time to make things with their own hands."

4.3 Another equally important psychological element at work relates to automation. Following the surge of robot introductions in the 1980s, a new trend seems to be approaching. For instance, at Japan's most modern car factory (Toyota on Kyushu), human skill and judgement have regained their former role. Some jobs performed by robots at other Toyota factories have been returned to workers. Apart from a philosophical reasoning given by one board member ("We would like to manufacture cars in a way that maintains communication between auto workers and customers"), a far more practical one is that the frequent model changes needed in response to increasingly diverse demand in turn require reprogramming of the robots. As the costs of retooling and engineering rise, traditional assembly work may become economical again.

4.4 Both macro-economic data and consumer behaviour in the 1980s prompted me to identify an internationalization of Japanese consumption patterns, but in the early 1990s, not least due to the impact of recession, savings and a more thrifty way of life have been gaining ground again. As end- of- year presents (obseibo), simpler, more practical and cheaper goods are preferred. Instead of buying new clothes, more and more people have decided to have the old ones repaired or altered. It has become more widely accepted that the simple daily cleaning in offices and factories should be done by employees themselves.

This process was sharply highlighted in a new book that appeared in Japanese in September 1992. In *The Concept of Honest Poverty (Seihin no shigo)*, 68-year-old Koji Nakano

attacked his fellow countrymen for a quarter of a century's waste-making and for taking over cultural and other rubbish from the West. The desire of economic planners to assign a greater role to the domestic market as a source of growth is also supported in Nakano's book, which soon became a bestseller, for his ideas are in tune with encouragement of traditional Japanese-style (material and intellectual) consumption. More and more academics in Japan are voicing criticism of consumerism in Japan. Tatsuya Nakamura, a professor at Chuo University, demonstrates convincingly in his book *Lonely Affluence (Yutakasa no kodoku)* how wealth has aggravated dissatisfaction among consumers. In the second part of his book he also discussed how real affluence might be attained, by regaining time for true fulfilment.

It was indeed high time for a return to the traditional system of values, for by the end of March 1991, the volume of consumer debt, other housing loans, totalled USD 475 bn (over seven times more than that in 1979). This meant that per capita debt was one third higher than in America and accounted for an almost equal proportion of annual disposable income (17% as opposed to 18% in the US). The rate of default has risen, particularly among younger people who were unable to resist the temptation of buying new products on credit when credit cards first became widespread in the 1980s. There has been a dramatic increase in the number of personal bankrupticies, even through the financial retaliation and social disgrace that follows must be a powerful deterrent. (As if illustrate the incredible flexibility and inventiveness of Japanese business, a new service being offered is a comprehensive, confidential moonlight flit for families fn financial straits.)

4.5 Although recessionary times do not favour the cause of consumer protection, the newly appointed chairman of the Fair Trading Commission (FTC), Masami Kogayu, promised in September 1992 to continue the tough anti-monopoly line of his predecessor. Judging by the numbers of legal cases taken up, the FTC has been showing more teeth. The FTC took firms to court on only seven occasions in 1990, but on 65 occasions in the period 1992-3. Japanese compaines were even offered videos and other aids to gaining information on the stipulations of the new anti-monopoly law. The most voluminous manual on the subject ran to 1,800 pages while some ready-made programmes for compliance were drawn up by larger companies, which made them compulsory reading for their staff.

The number of groups directly concerned with consumer representation in Japan was over 18,000 by the end of the 1980s. As a rule, they were well-organized and quite influential. Shufuren, the umbrella organization of the housewives' associations (fujin-kai) had a combined membership of more than 6 mn. The Japanese Consumers' Cooperative Union (Seikyo) had more than 10 mn members. One of the most crucial objectives of the consumer groups has been to bring about a steady improvement in the safety and quality of products.

The majority of Japanese companies, though careful of their image and goodwill and therefore giving priority to the quality of their products or services, seem to have been very reluctant to accept the idea of product liability. What they did not like was the prospect of consumers suing them, with the burden of proof falling on the company, and not as before on the plaintiffs. With their horror of bad publicity and the law courts, they would far rather

replace without argument any product complained of or pay any claim made for losses. One of their common arguments against product liability was that the legal requirements would only raise prices and hinder product development.

In October 1992, after tow years' study, the Social Policy Council, an advisory panel to the prime minister, again postponed making a recommendation on whether to seek the enactment of a product liability law. Consumer advocates strongly criticized the prevarication, saying it was a slap in the face for the government's five-year-plan for a better quality of life. Apart from the domestic criticism, there was also discontent abroad, so that it became realistic to expect passage of such a law in the next year or two, although the text would be more likely to resemble the fairly lenient EC regulations than the very rigorous American version.

After protracted argument, the product liability law was passed in the summer of 1994, and comes into force a year later. Interestingly (or typically), however, it had left loophole for producers by omitting to shift the burden of proof from plaintiff to defendant, while freeing manufacturers from their liability if "the state of scientific and technological knowledge at the time the product was supplied by the producer did not allow the defect to be detected."

4.6 Recent changes in the sphere of employment and management can also be considered qualitative in type. Various methods of economizing on time and costs in order to make white-collar work more efficient are coming to the fore. Fewer and shorter meetings are held in many companies, and some are introducing a system called gambaru taimu, when for a certain part of the day clerical staff must knuckle down to priority work and avoid all distractions like telephone calls and meetings. Shorter working days and smaller budgets for entertainment and staff drinking sessions have been introduced.

Traditional building blocks of the Japanese employment system like lifetime employment and seniority-based earnings and promotion seem to be breaking down. Instead there is a revaluation of abilities and skills, with more and more companies trying to match remuneration to individual performance. At Fujitsu, for example, wages are fixed for each employee after a discussion with the managers. Labour that is not fully utilized is now being redirected to more productive areas. A 1992 study by the Japan Productivity Centre suggested that white-collar productivity in Japan was 39% lower than in America. Since the proportion of white-collar workers has shot up from 36% of the workforce in 1970 to almost 50% in 1990, some repercussions of this were overdue. Fujitsu went as far as transferring former clerical staff onto the shop floor. In June 1994, Honda introduced a new system whereby managers who reach a certain age without being promoted above a certain level have to retire early or accept demotion and a pay cut of 30%. The new policy also proposed automatic retirement from managerial posts at age 55 or 56, even up to the equivalent of department heads. While some said the new system was too hard on older workers, it was recognized as necessary to Honda's restructuring programme under its current three-year strategic plan. Nissan also announced that from July 1994 it would introduce a new pay system for department managers, section chiefs and other managers, to reward performance more than seniority. Hitherto seniority has determined an average of 40% of a Nissan middlemanagerial salary. The new pay system is expected to raise the percentage governed by merit to about 85%. The new pay system was due to be applied to about 2.900 managers, and was expected to result in a maximum annual income difference of some JRY 2 mn (c. USD 20,000) for managers with comparable seniority who perform similar duties. A new development, worth noting although more of a temporary, cost-cutting nature, has been that all the three big interanational Japanese airlines, JAL, ANA and JAS, have decided to use contract and temporary staff instead of regular company employees to fill vacant cabin-crew positions.

The mobility of the labour force has increased from the point of view of employees as well. The desire for self-fulfilment or the attraction of higher pay or a job closer to home have brought higher staff-turnover ratios than ever before. (In 1972, only 2% of the employed changed their jobs, while the figures for 1982 and 1992 were 3% and 6%.) The process may speed up even further, according to Iwao Nakatani, Professor of Economics at Hitotsubashi University, who says that better utilization of human resources is a prior requirement for further development in Japan. The sofar ample pool of generalists will have to be supplemented by specialists able to "invent" new products and services. Likewise, on-the-job training will have to be complemented by experience and knowledge gained at other companies. So companies must try not only to re-educate their own employees, but also strive to attract in experts from outside. Japan's biggest car manufacturer, Toyota, announced recently that it wanted to hire new designers, probably in their early thirties, on one-year contracts renewable according to performance, with flexible working hours and above-average pay.

In a recent analysis in *Nikkei Weekly*, Hiroyuki Yoshikawa, President of the University of Tokyo, called for a re-manufacturing of Japan's manufacturing industry, saying that the doctrine of constantly expanding market shares has already proved to be nonsense. The industry, he said, must express a strong resolution to take the initiative in creating completely new markets. In order to gain an edge on other nations "the manufacturing sector must move quickly to seek out individuals with creative ideas. . . attract talented youth, and establish a system to reward them properly".

4.7 The deliberate implanting of original ideas and individual creativity into the Japanese working environment, which has not abounded with them so far, will obviously bring further qualitative, if not revolutionary changes, which in my view will provide another example of how development is gaining ground at the expense of growth.

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